IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 2, 6, 7, 10, 12, 13, 15-20, 23 and 27-31 in accordance with the following:

1. (Currently Amended) A packet control system comprising:

a packet forwarder that transfers a packet received from a network interface to another network interface; and

a packet control device that routes the packet using a routing process, wherein the packet forwarder includes:

a received packet transfer unit that transmits to the packet control device a routing information packet received from the network interface, and wherein the packet control device includes:

a virtual interface that has address information associated with the network interface of the packet forwarder;

a transmitted packet reception unit that receives the routing information packet, that associates the routing information packet with the virtual interface, and that delivers the routing information packet to the routing process; and

a transmitted packet transfer unit that receives the routing information packet sent by the routing process, and that transmits the routing information packet to the packet forwarder.

2. (Currently Amended) A packet control device which constructs a routing table for a ~~packer~~ packet forwarder controlled by the packet control device, using a routing process running on the packet control device, the packet control device comprising:

a virtual interface that has address information associated with the network interface of the packet forwarder;

a transmitted packet reception unit that receives the routing information packet transmitted from the packet forwarder, that associates the routing information packet with the virtual interface corresponding to an incoming network interface of the packet forwarder, and that transmits the routing information packet to the routing process; and

a transmitted packet transfer unit that receives the routing information packet sent by the routing process, and that transmits the routing information packet to the packet forwarder.

3. (ORIGINAL) The packet control device according to claim 2, further comprising:

a routing table transfer unit that acquires a routing table updated by the routing process, and that transmits the routing table to the packet forwarder.

4. (ORIGINAL) A packet control device which constructs a routing table for a packet forwarder controlled by the packet control device which determines an outgoing network interface of the packet received at an incoming network interface of the packet forwarder, the packet control device comprising:

a plurality of network interfaces; and

a plurality of virtual interfaces each having address information that is associated with one of the network interfaces of the packet forwarder, the network interfaces of the packet control device and the virtual interfaces being divided into a plurality of groups, wherein

the packet control device routes the packet using a routing process associated with each of the groups considering interfaces belongs to the groups to create a dedicated routing table for each, the each of the groups corresponds to a separate device.

5. (ORIGINAL) The packet control device according to claim 4, wherein

the virtual interfaces are grouped for each packet forwarder, and

the packet control device maintains routing tables using a routing process associated with each of the virtual interfaces grouped.

6. (CURRENTLY AMENDED) A packet forwarder which forwards a packet from its network interface to its other network interface according to its routing table that makes a destination address of a packet associate with a next transfer destination, comprising a received packet transfer unit that transmits a routing information packet received at the network interface to a packet control device that maintains the routing table of the packet forwarder using a routing process that generates the routing table based on routing information on the packet received at the network interface.

7. (CURRENTLY AMENDED) The packet forwarder according to claim 6, further comprising a routing table setting unit that receives a the routing table from the packet control

device, and that sets the routing table to the packet forwarder.

8. (ORIGINAL) A method of maintaining a routing table using a routing process, the method comprising:

receiving a routing information packet which is received by a packet forwarder;

associating the routing information packet with a virtual interface that has address information associated with a network interface of the packet forwarder;

delivering the routing information packet to the routing process;

receiving the routing information packet sent by the routing process; and

transmitting the routing information packet to the packet forwarder for transmitting from its network interface.

9. (ORIGINAL) The method according to claim 8, further comprising:

acquiring a routing table updated by the routing process; and

transmitting the routing table to the packet forwarder.

10. (CURRENTLY AMENDED) A method of maintaining a routing table in a system that includes a packet forwarder and a packet control device, the packet forwarder including a plurality of network interfaces, the packet control device including a plurality of network interfaces and a plurality of virtual interfaces, each of the virtual interfaces having address information that is associated with one of the network interfaces of the packet forwarder, the method comprising:

dividing the network interfaces of the packet control device and the virtual interfaces into a plurality of groups; and

maintaining a routing table of each ~~of~~ for the groups using a routing process associated with each of the groups.

11. (ORIGINAL) The method according to claim 10, wherein the virtual interfaces are grouped for each packet forwarder, further comprising maintaining a routing table of each packet forwarder using a routing process associated with each of the virtual interfaces grouped.

12. (CURRENTLY AMENDED) A method of maintaining a routing table of a packet forwarder, the method comprising:

receiving a routing information packet from a network interface of a packet forwarder;

and

transferring the routing information packet to a packet control device, wherein the routing table makes a destination address of a packet associate with a next transfer destination.

13. (CURRENTLY AMENDED) The method according to claim 12, further comprising:

receiving ~~a~~ the routing table from a packet control device; and

setting the routing table to the packet forwarder.

14. (CURRENTLY AMENDED) A computer-readable storage for controlling a computer, comprising ~~A~~ a computer program ~~product~~ for routing a packet using a routing process, including computer executable instructions ~~stored on a computer readable medium, wherein the instructions~~ which, when executed by the computer, cause the computer to perform:

receiving a routing information packet from a network interface of a packet forwarder;

transmitting the routing information packet to a packet control device;

receiving the routing information packet from the packet forwarder;

associating the routing information packet with a virtual interface that has address information associated with the network interface;

transmitting the routing information packet to the routing process;

receiving the routing information packet transmitted from the routing process; and

transmitting the routing information packet to the packet forwarder.

15. (CURRENTLY AMENDED) The ~~computer program product~~ computer-readable storage according to claim 14, wherein the instructions further cause the computer to perform:

acquiring a routing table updated by the routing process; and

transmitting the routing table to the packet forwarder.

16. (CURRENTLY AMENDED) A computer-readable storage for controlling a computer, comprising ~~A~~ a computer program ~~product~~ for maintaining a routing table, the packet forwarder including a plurality of network interfaces, the packet control device including a plurality of network interfaces and a plurality of virtual interfaces, each of the virtual interfaces having address information that is associated with one of the network interfaces of the packet forwarder, the computer program ~~product~~ including computer executable instructions ~~stored on a computer readable medium, wherein the instructions~~ which, when executed by the computer, cause the computer to perform:

dividing the network interfaces of the packet control device and the virtual interfaces into a plurality of groups; and

maintaining a routing table of each of the groups using a routing process associated with each of the groups.

17. (CURRENTLY AMENDED) The ~~computer program product~~ computer-readable storage according to claim 16, wherein the virtual interfaces are grouped for each packet forwarder, and the instructions further cause the computer to perform maintaining a routing table of each packet forwarder using a routing process associated with each of the virtual interfaces grouped.

18. (CURRENTLY AMENDED) A computer-readable storage for controlling a computer, comprising ~~A~~ a computer program ~~product~~ for maintaining a routing table of a packet forwarder, including computer executable instructions ~~stored on a computer readable medium, wherein the instructions~~ which, when executed by the computer, cause the computer to perform:

receiving a routing information packet from a network interface of the packet forwarder; and

transferring the routing information packet to the packet control device, wherein the routing table makes a destination address of a packet associate with a next transfer destination.

19. (CURRENTLY AMENDED) The ~~computer program product~~ computer-readable storage according to claim 18, wherein the instructions further cause the computer to perform:

receiving ~~a~~ the routing table from a packet control device; and

setting the routing table to the packet forwarder.

20. (CURRENTLY AMENDED) A router control device comprising:

a virtual interface setting unit that creates and manages virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

a routing unit that generates a routing table for the forwarder based on routing information in routing information packets received at the network interface of the forwarder and transferred by the forwarder to the router control device; and

a routing information storage unit that stores a routing table created and managed by the routing unit for packet forwarding between the virtual interfaces.

21. (ORIGINAL) The router control device according to claim 20, further comprising a tunnel transfer unit that transfers the routing information packet via a communication path that connects between the network interface and the virtual interface, wherein

the routing information storage unit stores the routing information in the routing information packet transferred by the tunnel transfer unit, and

the routing unit generates the routing table for the forwarder based on the routing information stored in the routing information storage unit.

22. (ORIGINAL) The router control device according to claim 20, further comprising:

a routing table transmission unit that acquires the routing table and that transmits the routing table to the forwarder, wherein

the routing unit generates the routing table for the forwarder based on the routing information stored in the routing information storage unit.

23. (CURRENTLY AMENDED) A router control system which includes a forwarder and a router control device, wherein

the router control device includes

a virtual interface setting unit that that creates and manages virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

a tunnel transfer unit that transfers the routing information packet via a communication path that connects between the network interface and the virtual interface;

a routing information storage unit that stores routing information in the routing information packet transferred by the tunnel transfer unit;

a routing unit that generates the routing table for the forwarder based on the routing information stored in the routing information storage unit; and

the routing table transmission unit that acquires the routing table, and transmits the routing table to the forwarder, and

the forwarder forwards a packet from its network interface to its other network interface according to its routing table, and includes a received packet transfer unit that transmits a routing information packet received at the network interface to the router control device that maintains the routing table of the forwarder using a routing process.

24. (CURRENTLY AMENDED) A method of maintaining a routing table, comprising:

creating and managing virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

generating a routing table for the forwarder based on routing information in routing information packets received at the network interface of the forwarder and transferred by the forwarder to the router control device; and

storing a routing table created and managed by the routing unit for packet forwarding between the virtual interfaces.

25. (ORIGINAL) The method according to claim 24, further comprising transferring the routing information packet via a communication path that connects between the network interface and the virtual interface, wherein

the storing includes storing the routing information in the routing information packet transferred by the tunnel transfer unit, and

the generating includes generating the routing table for the forwarder based on the routing information stored.

26. (ORIGINAL) The method according to claim 24, further comprising:

acquiring the routing table; and

transmitting the routing table to the forwarder, wherein

the generating includes generating the routing table for the forwarder based on the routing information stored.

27. (CURRENTLY AMENDED) A method of maintaining a routing table, comprising:

creating and managing virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

transferring the routing information packet by tunneling via a communication path that connects between the network interface and the virtual interface;

storing routing information on the routing information in the routing information packet transferred;

generating a routing table for the forwarder based on the routing information stored;

acquiring the routing table;

transmitting the routing table to the forwarder;

forwarding a packet from a network interface of the forwarder to other network interface of the forwarder according to a routing table of the forwarder; and

transmitting a routing information packet received at the network interface of the forwarder to the router control device that maintains the routing table of the forwarder using a routing process.

28. (CURRENTLY AMENDED) A computer-readable storage for controlling a computer, comprising ~~A~~ a computer program ~~product~~ for maintaining a routing table, including computer executable instructions ~~stored on a computer readable medium, wherein the instructions~~ which, when executed by the computer, cause the computer to perform:

creating and managing virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

generating a routing table for the forwarder based on routing information in routing information packets received at the network interface of the forwarder and transferred by the forwarder to the router control device; and

storing a routing table created and managed by the routing unit for packet forwarding between the virtual interfaces.

29. (CURRENTLY AMENDED) The ~~computer program product~~ computer-readable storage according to claim 28, wherein the instructions further cause the computer to perform transferring the routing information packet via a communication path that connects between the network interface and the virtual interface, wherein

the storing includes storing the routing information in the routing information packet transferred by the tunnel transfer unit, and

the generating includes generating the routing table for the forwarder based on the routing information stored.

30. (CURRENTLY AMENDED) The ~~computer program product~~ computer-readable storage according to claim 28, wherein the instructions further cause the computer to perform:

acquiring the routing table; and

transmitting the routing table to the forwarder, wherein

the generating includes generating the routing table for the forwarder based on the routing information stored.

31. (CURRENTLY AMENDED) A computer-readable storage for controlling a computer, comprising A a computer program ~~product~~ for maintaining a routing table, including computer executable instructions ~~stored on a computer readable medium, wherein the instructions~~ which, when executed by the computer, cause the computer to perform:

creating and managing virtual interfaces on a router control device according to corresponding network interfaces of a forwarder, each of the virtual interfaces having address information that is associated with one of the network interfaces of the forwarder;

transferring ~~the~~ a routing information packet by tunneling via a communication path that connects between the network interface and the virtual interface;

storing routing information on the routing information in the routing information packet transferred;

generating a routing table for the forwarder based on the routing information stored;

acquiring the routing table;

transmitting the routing table to the forwarder;

forwarding a packet from a network interface of the forwarder to ~~other~~ another network interface of the forwarder according to a routing table of the forwarder; and

transmitting a routing information packet received at the network interface of the forwarder to the router control device that maintains the routing table of the forwarder using a routing process.